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- 17-19
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original presentation
Sub 27
- 17. A method of constructing an assay assembly, comprising:
providing a storage well including a base and side walls; and
inserting a chip on which an array of reactive species is immobilized into the
storage well.--
- 18. The method of claim 17, further comprising providing a protective, removable
packaging over the storage well.--
- 19. The method of claim 17, further comprising placing the storage well into a
carrying tray.--
- Q3
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REMARKS

Claims 1-13 and 15-19 are pending. By this Amendment, claim 14 is cancelled, claims 3 and 12 are amended, and new claims 16-19 are added. Support for the amendments can be found in Figs. 2 and 3 of the instant specification. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Rejection Under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 3, 12 and 14 under 35 U.S.C. §112, second paragraph. Applicants submit that the above amendment to claims 12 and cancellation of claim 14 overcome the rejections stated in the Office Action.

Regarding claim 3, Applicants submit that the term "substantially" recited in the phrase "substantially covers the area of the base" (emphasis added), is definite. 35 U.S.C. §112, second paragraph, only requires that the claims recite that which Applicants regard as their invention with a reasonable degree of precision and particularity. In re Moore et al., 169

USPQ 236 (CCPA 1971). The claims need not define the invention with any higher level of precision and particularity.

MPEP 2173.05(b) describes the use of the particular term "substantially" in claims. As described, this term is commonly used in claims to describe a particular characteristic of the claimed invention. The cited cases described in this section are clear that the Patent Office must also look to the supporting specification (and drawings) when construing a claim that recites the term "substantially," in order to determine this term's meaning in that claim. For example, in In re Nehrenberg, 126 USPQ 383 (CCPA 1960), the court found a limitation including the term "substantially" to be definite in view of the "general" guidelines contained in the specification.

In the present application, the specification and drawings provide sufficient guidelines for determining the meaning of the recited term "substantially" in claim 3. For example, Figs. 2 and 3 show the biochip 10, located on the surface of the base 4. The biochip 10 is situated on the base 4 of the storage well 1, so as to "substantially cover" the base. The meaning of the phrase "substantially covers the area of the base," as recited in claim 3, would have been understood by one having ordinary skill in the art in view of the guidance provided in the present specification and, for example, in Figs. 2 and 3.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

Rejection Under 35 U.S.C. §102(b)

The Office Action rejects claims 1-4, 6 and 8-15 under 35 U.S.C. §102(e) over U.S. Patent No. 5,843, 767 to Beattie ("Beattie"). Applicants respectfully traverse the rejection.

Beattie does not teach each and every feature of the claimed invention. Claim 1 recites, "an assay assembly comprising a chip on which an array of reactive species is

immobilized; and a storage well having a base and side walls, said chip being located in said storage well" (emphasis added). Beattie does not teach such an assay assembly.

The Office Action asserts that Beattie teaches of a microfabricated porous apparatus for detecting binding reactions. However, Beattie does not teach an assay assembly, in which a chip is located in a storage well having a base and side walls, as in claim 1. The microfabricated device of Beattie, is "a substrate containing a multiplicity of discrete and isolated regions across a surface thereof" (emphasis added). See Beattie at column 5, lines 29-30. In Beattie, the discrete regions are created by placing a second sheet of material having an array of holes or "tapered wells" over the top of the substrate. In the invention of claim 1, a chip is located in a storage well that has a base and side walls. By contrast, Beattie teaches a wafer that is the base of the "discrete regions" and not a storage well having a base, the wafer of Beattie providing a surface onto which the sheet containing all of the tapered wells is secured. See Beattie at Figure 1A and column 10, lines 36-44.

Further, Beattie does not teach an assay assembly comprising a chip on which an array of reactive species is immobilized in a storage well. In addition to being structurally distinct from the invention of claim 1 as described above, each discrete region of the microfabricated device of Beattie contains "essentially homogenized samples of biomolecules of pre-determined structures." See Beattie at column 5, lines 36-37. In the invention of claim 1, the chip carries an array of reactive species, and the chip is located in the storage well.

Thus, Beattie does not anticipate the invention of claim 1. Claims 2-4, 6 and 8-15 depend from claim 1, and so, accordingly also are not anticipated by Beattie. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claims 5 and 7 under 35 U.S.C. §103(a) over Beattie in view of GB 2147698 A to Albon et al. ("Albon"). Applicants respectfully traverse the rejection.

For the reasons set forth above, Beattie does not teach the invention of claim 1. Beattie also does not suggest the claimed invention. Albon does not cure the deficiencies of Beattie. The Office Action asserts that Albon teaches projections in storage wells for holding assaying items in place and a test apparatus for comprising a holder having a plurality of inserts for reaction wells. However, even if these assertions are true, which Applicants do not admit, Albon does not teach or suggest "an assay assembly comprising a chip on which an array of reactive species is immobilised; and a storage well having a base and side walls, said chip being located in said storage well," as claimed. Thus, Albon does not provide teaching, suggestion or motivation to modify Beattie to achieve the claimed invention.

Thus, Beattie in view of Albon would not have rendered the claimed invention obvious. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

New Claims

By this Amendment, claims 16-19 are added. Support for claim 16 can be found in original claim 12. Support for claims 17-19 can be found in the instant specification from page 5, line 12 to page 6, line 25.

Claim 16 depends from allowable claim 12, and so, accordingly, is also allowable.


Claims 17 is directed to a method of making an assay assembly having each and every limitation of the assay assembly of claim 1. Under MPEP 821.04, "process claims which depend from or otherwise include all the limitations of the patentable product will be entered as a matter of right if the amendment is presented prior to final rejection or allowance." Accordingly, claim 17 must be entered and examined. As claim 1 is allowable, the method of making the assay assembly of claims 17 is also believed to be allowable. Claims 18 and 19 depend from allowable claim 17, and so, accordingly, are also allowable. Accordingly, Applicants respectfully request examination and allowance of new claims 16-19.

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-13 and 15-19 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Jacob A. Doughty
Registration No. 46,671

JAO:JAD/jam

Attachment:
Appendix

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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APPENDIX

Changes to Claims:

Claim 14 is canceled.

Claims 16-19 are added.

The following are marked-up versions of the amended claims:

3. (Amended)___ An assembly according to claim 1, wherein the chip substantially ~~fills~~covers the area of the base.

12. (Amended)___ An assembly according to claim 11, wherein the array comprises three storage wells, ~~preferably arranged in a line~~.